ILLINOIS PRECALCULUS · UNIT 4 · 10 QUESTIONS

Limits, Sequences, and Series — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **In an arithmetic sequence with $a_1 = 10$ and common difference -2, the sixth term is**

- A 0
- B 2
- C -2
- D 20

Understand It with Pulse | Flag a mistake

2 **The sum of the first 5 terms of an arithmetic sequence with $a_1 = 1$ and common difference 2 is**

- A 20
- B 25
- C 30
- D 15

Understand It with Pulse | Flag a mistake

3 **In a geometric sequence with $a_1 = 5$ and common ratio 2, the fourth term is**

- A 20
- B 30
- C 80
- D 40

Understand It with Pulse | Flag a mistake

4 The sum of the infinite geometric series with $a_1 = 20$ and $r = \frac{1}{4}$ is

- **A** 25
- **B** $\frac{80}{3}$
- **C** 24
- **D** 80

Understand It with Pulse | Flag a mistake

5 The sum $\sum_{k=1}^{3} (k + 2)$ is

- **A** 9
- **B** 10
- **C** 12
- **D** 11

Understand It with Pulse | Flag a mistake

6 The sequence 2, 6, 18, 54 has common ratio

- A 2
- B 3
- C 4
- D 6

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7 The limit of the sequence $a_n = \frac{3n + 2}{n}$ as $n \to \infty$ is

- A 0
- B 2
- C 3
- D 5

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8 **The sum of the first 4 terms of 1, 4, 9, 16 is ____.**

ANSWER _____

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9 **For $a_n = n^2 + 2n$, the fourth term is ____.**

ANSWER _____

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10 **The limit $\lim_{x \to 3} (4x - 5)$ is ____.**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	A	**5.**	C	**9.**	24
2.	B	**6.**	B	**10.**	7
3.	D	**7.**	C		
4.	B	**8.**	30		

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